

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Knight, Timothy O.* ) Art Unit: *unknown*  
 )  
 Serial No.: *unknown* ) Examiner: *unknown*  
 )  
 Filed: 8/31/01 as a *divisional of serial no.* )  
*09/173,853 filed 10/16/98* )  
 )  
 For: *Interface and Programs Using Visual Data*)  
*Arrangements for Expressing User Preferences*  
*Concerning an Action or Transaction*  
 -----

PRELIMINARY AMENDMENT

Honorable Commissioner  
 of Patents and Trademarks  
 Washington, D.C. 20231

Sir:

Applicant hereby submits the following to place the present application in a  
 condition for allowance:

IN THE SPECIFICATION:

- (a) Please amend the title of the invention to read:  
**- - Interface and Program Using Visual Data Arrangements for Expressing  
 User Preferences Concerning an Action or Transaction - -**
- (b) Please cancel Appendix A, pp. 21 – 64.
- (c) Please add the following text at page 1, line 5:

-- CROSS REFERENCE TO RELATED APPLICATIONS

The present application is a divisional of serial no. 09/173,853 filed October  
 16, 1998 entitled *Graphical Data Collection Interface*, which is hereby incorporated by  
 reference. --

- (d) Please insert the following text at the beginning of the specification, just after the CROSS REFERENCE TO RELATED APPLICATIONS:

**-- CROSS REFERENCE TO MICROFICHE APPENDIX**

Appendix A, which forms part of this disclosure and is incorporated by reference herein, is a microfiche appendix consisting of 1 sheet of microfiche having a total of 46 frames. This sheet of microfiche was submitted previously in connection with related application serial no. 09/173,853. Microfiche Appendix A is a list of computer programs and related data in an embodiment of the present invention, which is described more completely below. --

**IN THE ABSTRACT:**

Please replace the text in the present Abstract with the following text set forth on the next page:

-- ABSTRACT

A graphical user interface and related programs are provided for capturing and retrieving data corresponding to subjective motivations, mental impressions, reasons, etc., for engaging in a particular transaction, such as for purchasing or selling a security or other item. The interface presents the user with a menu of potential selectable parameters, and a preference field for visually identifying and arranging such parameters. By selecting and placing such data parameters on the data canvas, a user can effectively express rationale or factors associated with an actual or proposed transaction in a visual depiction or picture form. The interface is used in connection with a stock portfolio management application, where it is used to capture user rationale and logic for purchasing or selling financial instruments such as securities, options, etc., and in other environments where it is desirable to collect or query data in a combination of text and picture form. Query options and feedback concerning such visual depictions and data pictures can also be provided within the interface. --

IN THE CLAIMS:

Please cancel claims 1 – 23, 42-74 and 91-120 without waiver or prejudice to pursue these claims in a separate application. Please substitute the following as a replacement for pending claims 24 – 41 and 75 – 90:

24. (Amended) An electronic interface for permitting an operator to identify parameters concerning an action and/or transaction, the interface comprising:
- a menu providing a set of parameters available for selection by the operator, said menu occupying a first portion of the interface;
  - a preference field occupying a second portion of the interface for visually displaying any identified personal parameters selected by the operator for the particular operator transaction from said set of parameters;
  - wherein the operator can dynamically select such personal parameters from said menu and express input data in a visual form in said preference field, said input data having data characteristics based on a physical placement and arrangement of any identified personal parameters in said preference field ; and
  - further wherein said input data is stored in a transaction record form usable by a computing system.
25. (Original) The interface of claim 24, wherein the personal parameters describe one or more mental impressions of such transaction.
26. (Amended) The interface of claim 24, wherein said parameters are arranged and placed in said preference field by such operator selecting and moving said parameters along a distance spanning from said menu to said preference field by physically manipulating an electronic pointing device.
27. (Original) The interface of claim 26, wherein said distance is less than approximately half the width of said interface as seen by the operator.
28. (Original) The interface of claim 24, wherein said transaction record form includes numeric data values, but is generated without numeric data input by the operator.

29. (Original) The interface of claim 28, wherein said numeric data values are based on the physical location of said parameters as placed by the operator in said preference field.
30. (Original) The interface of claim 24, wherein said identified personal parameters can be ranked in relative importance by the operator based on their location in said preference field.
31. (Original) The interface of claim 30, wherein a relative ranking between data parameters can be changed by the user by altering a relative physical arrangement of said data parameters on said parameter canvas.
32. (Original) The interface of claim 30, wherein said preference field includes a gradient visible to the operator for assisting in the ranking of said parameters.
33. (Original) The interface of claim 30, wherein said parameters can be ranked by both a relative horizontal and vertical location in said preference field.
34. (Original) The interface of claim 32, further wherein said preference field conveys visible feedback information when the operator is arranging said parameters.
35. (Original) The interface of claim 24, wherein when the interface is invoked by the operator, an initial proposed arrangement of parameters is presented to the operator in said preference field, which initial proposed arrangement can be modified by the operator.
36. (Original) The interface of claim 24, wherein said parameters include factors associated with an operator's reasons for performing or engaging in a particular activity.
37. (Amended) The interface of claim 24, wherein said parameters include factors associated with lessons learned by a user concerning an event.
38. (Amended) The interface of claim 24, wherein said transaction record form can be retrieved and modified by the operator at a later time.
39. (Amended) The interface of claim 24, wherein said parameters can be customized by the operator.
40. (Amended) The interface of claim 24, wherein said interface also provides a visual comparison between input data in said transaction record form and other transaction record forms.

41. (Amended) The interface of claim 24, wherein said interface also provides visual feedback to such operator based on an evaluation of said input data in said transaction record form.
75. (Amended) A method for permitting a user to identify personal parameters concerning an action and/or transaction to a computer program, the method comprising the steps of:
- providing a menu of one or more parameters available for selection by the user, said menu being displayed in a first portion of an interface visible to the user; and
  - providing a preference field occupying a second portion of the interface visible to the user; and
  - permitting the user to move any of said parameters to said preference field so as to identify such user's personal parameters associated with the transaction; and
  - generating a data picture by visually displaying said personal parameters ranked in an order of importance to the user; and
  - storing said personal parameters are stored in a transaction record form usable by the computer program.
76. (Original) The method of claim 75, wherein all of the user's personal parameters are captured using a single data picture.
77. (Original) The method of claim 75, wherein all of the user's personal parameters are captured during a data collection session using a single data collection screen.
78. (Original) The method of claim 75, wherein the personal parameters describe one or more mental impressions of such action and/or transaction.
79. (Original) The method of claim 75, wherein said parameters associated with the transaction can be selected and moved by said user along a distance spanning from said menu to said preference field by physically manipulating an electronic pointing device.
80. (Original) The method of claim 79, wherein said distance is less than approximately half the width of said interface as seen by the user.
81. (Original) The method of claim 75, wherein said transaction record includes numeric data values, but is generated without numeric data input by the user.

82. (Original) The method of claim 81, wherein said numeric data values are based on the physical location of said parameters as placed by the user in said preference field.
83. (Original) The method of claim 75, wherein said parameters can be ranked according to their physical arrangement in said preference field.
84. (Original) The method of claim 75, further including a step of providing a gradient visible to the user for assisting in the ranking of said parameters.
85. (Original) The method of claim 75, further including a step of providing visible feedback information when the user arranges said parameters.
86. (Original) The method of claim 75, wherein said data parameters can be ranked by both a relative horizontal and vertical location in said preference field.
87. (Original) The method of claim 75, further including a step of presenting an initial data picture to the user in said preference fields, said initial data picture being based on prior data pictures previously entered by the user.
88. (Original) The method of claim 75, wherein said parameters include factors associated with a user's reasons for performing or engaging in a particular activity.
89. (Original) The method of claim 75, further including a step of providing a visual comparison between said data picture and other data pictures.
90. (Original) The method of claim 75, further including a step of providing visual feedback based on an evaluation of said data input.

**Please add new claims 121 – 141:**

121. (New) The interface of claim 24, wherein a query for locating other transaction record forms or analyses based on the same can be formulated within the interface using said transaction record form.
122. (New) The method of claim 75, further including a step: performing a query for locating other transaction record forms or analyses based on the same within the interface using said transaction record form.

123. (New) An electronic interface for permitting an operator to store and retrieve data with an underlying program, the interface comprising:
- a menu providing a plurality of parameters available for selection by the operator;
    - said plurality of parameters including a hierarchically organized list of reasons, assertions, influencing factors and/or motivations associated with a particular action and/or particular transaction, such that said plurality of parameters are organized individually and by category;
  - a preference field adapted so that the operator can display and arrange selected ones of said plurality of parameters within said preference field in accordance with the operator's selection of said selected ones of said plurality of parameters;
    - wherein the operator can express input data in a visual form in said preference field, said input data having data characteristics based on: (1) a physical placement of each of said selected ones of said plurality of parameters; and (2) a relative physical arrangement of said selected ones of said plurality of parameters;
    - further wherein said input data in said visual form is converted by the interface and/or underlying program into a form suitable for storage and retrieval as a data record associated with said particular action and/or said particular transaction;
    - further wherein the preference field provides visual feedback to assist the operator in expressing said input data in said visual form; and
  - a feedback area for presenting retrieved output data information from the underlying program responsive to said input data provided by the operator.

124. (New) The interface of claim 123, wherein the retrieved output data information includes a data record and/or an analysis of one or more data records.

125. (New) The interface of claim 123, wherein said plurality of parameters include a first set of predefined reasons, assertions, influencing factors and/or motivations provided by the underlying program, and a second set customized reasons, assertions, influencing factors and/or motivations provided by the operator.



126. (New) The interface of claim 123, wherein the underlying program is used for storing and retrieving data for a customer support application, a marketing and/or sales applications program, and/or stock portfolio management program.
127. (New) The interface of claim 123, wherein said plurality of parameters include both text items and icon items.
128. (New) The interface of claim 123, wherein said interface is implemented as a Java applet operating within an internet browser.
129. (New) The interface of claim 123, wherein said hierarchically organized list is implemented in a tree structure menu presented to the operator, and such that at least all of said categories can be displayed within said interface at the same time.
130. (New) The interface of claim 123, wherein the operator can use said menu and said preference field at at the same time without changing screens.
131. (New) The interface of claim 130, wherein said feedback area is presented within the interface at the same time as said menu and preference field.
132. (New) The interface of claim 123, wherein said visual feedback includes a color and/or a shading change visible in said preference field.
133. (New) The interface of claim 132, wherein said visual feedback includes a visual change in said selected ones of said plurality of parameters in response to an arranging of one of said selected ones of said plurality of parameters.
134. (New) The interface of claim 123 wherein said visual feedback includes a chart and/or an icon generated by the underlying program dynamically in response to said input data.
135. (New) The interface of claim 123 wherein said retrieved output data information in said feedback area includes a chart and/or an icon generated by the underlying program dynamically in response to a query formulated using said input data.
136. (New) The interface of claim 123 wherein said retrieved output data information in said feedback area includes one or more data records, and/or an analysis of one or more data records provided in response to a query formulated using said input data.
137. (New) The interface of claim 123, wherein said said particular action and/or said particular transaction concerns a problem experienced by a user with a product, and said retrieved output data information includes a list of potential areas for determining a cause of said problem, and/or provides a course of action for said problem to said user.

138. (New) The interface of claim 123, wherein said said particular action and/or said particular transaction concerns a product or service of interest to a user, and said retrieved output data information includes a list of possible options presented to said user.
139. (New) The interface of claim 123, wherein said plurality of parameters pertain to technical charting indicators, press releases, suggestions from third parties, and/or company related factors to be considered for purchasing and/or selling a security.
140. (New) The interface of claim 123, wherein a plurality of separate data records are maintained for said particular action and/or said particular transaction.
141. (New) A method of interacting with a user to store and retrieve data with an underlying program through an electronic interface, the method comprising the steps of:
- (a) providing a plurality of parameters available for selection by the user within a menu portion of the interface;  
said plurality of parameters including a hierarchically organized list of reasons, assertions, influencing factors and/or motivations associated with a particular action and/or particular transaction , such that said plurality of parameters are organized individually and by category;
  - (b) arranging selected ones of said plurality of parameters into a visual form within a preference field portion of the interface in accordance with the user's selection of said selected ones of said plurality of parameters;
  - (c) providing visual feedback to assist the operator in formulating said visual form; and
  - (d) generating input data having data characteristics based on: (1) a physical placement of each of said selected ones of said plurality of parameters; and (2) a relative physical arrangement of said selected ones of said plurality of parameters;
  - (e) converting said input data into a form suitable for storage and retrieval as a data record associated with said particular action and/or said particular transaction;
  - (f) presenting retrieved output data information from the underlying program in a feedback portion of the interface in response to said input data provided by the operator.

### REMARKS (37 CFR 1.111)

Original claims 24 – 41, 75 - 90 and new claims 121 – 141 are pending. The title of the invention has been changed to better describe the present subject matter, and a specific cross-reference to the related applications and microfiche appendix has been inserted as well.

The pending claims are presented in the present application as a result of a restriction requirement issued by the Examiner on December 14, 1999 in related application serial no. 09/173,853, and are directed to the species identified as Group II therein.

The claims are believed to be allowable for at least the following reasons:

(1) Original independent claim 24 has been amended to recite that the operator:

“... can dynamically select such personal parameters from said menu and express input data in a visual form in said preference field, said input data having data characteristics based on a physical placement and arrangement of any identified personal parameters in said preference field...”

This feature is not taught or suggested in the art, so the Applicant submits that the claim and its dependent claims should be allowable. Some of the dependent claims were amended to correct for minor reference errors, and/or to conform them to the revised language of claim 24.

(2) Original independent claim 75 is also amended and is directed to another aspect of the invention which permits a user to create a “data picture” based on the “personal parameters” being “ranked in an order of importance” in the preference field. This limitation is expressed as follows:

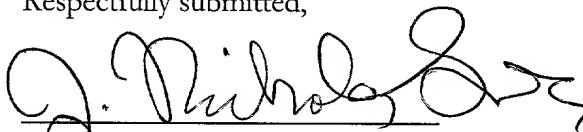
“...permitting the user to move any of said parameters to said preference field so as to identify in visual form any of such user’s personal parameters associated with the transaction; and  
generating a data picture by visually displaying said personal parameters ranked in an order of importance to the user...”

This is not shown or suggested by the prior art, so this claim and its dependent claims (76 – 90) are believed to be allowable at this time.

- (3) New dependent claim 121 depends from claim 24, and merely refers to the fact that the input data can be used as a query for locating other information, i.e., as in the case of a typical search engine. This claim should be allowable for at least the same reasons as claim 24, and for the reason that the prior art does not teach this kind of mechanism. The same analysis holds true for new dependent claim 122.
- (4) New independent claim 123 is directed to more specific implementations of the preferred embodiments of the invention. The claim, and its dependent claims (124 - 140 ) are believed to distinguish over the prior art for a number of reasons, and Applicants believe such will be apparent to the Examiner after a careful inspection.
- (5) New independent method claim 140 recites a method practiced by certain preferred embodiments, and, again is believed to be sufficiently distinctive so as to merit allowance at this time.

The claims are believed to be allowable over the art of record, and thus early allowance of the same is earnestly solicited.

Respectfully submitted,



Date: August 31, 2001

J. Nicholas Gross, Attorney, Reg. No. 34,175

1385 Mission St.  
Suite 240  
San Francisco, CA 94103  
(415) 551-8298

I hereby certify that the foregoing is being deposited with the U.S. Postal Service by Express Mail Label No. EL009858136US, to the Commissioner of Patents and Trademarks, this 31st day of August 2001.
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## VERSIONS WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

24. (Amended) An electronic interface for permitting an operator to identify parameters concerning an action and/or transaction, the interface comprising:
- a menu providing a set of parameters available for selection by the operator, said menu occupying a first portion of the interface;
  - a preference field occupying a second portion of the interface for visually displaying any identified personal parameters selected by the operator for the particular operator transaction from said set of parameters;
  - wherein the operator can dynamically select such personal parameters [in] from said menu and [move them to said preference field] express input data in a visual form in said preference field, said input data having data characteristics based on a physical placement and arrangement of any identified personal parameters in said preference field; and
  - further wherein said [personal parameters are] input data is stored in a transaction record form usable by a computing system.
25. (Original) The interface of claim 24, wherein the personal parameters describe one or more mental impressions of such transaction.
26. (Amended) The interface of claim 24, wherein said parameters are arranged and placed in said preference field [selected and moved] by such operator selecting and moving said parameters along a distance spanning from said menu to said preference field by physically manipulating an electronic pointing device.
27. (Original) The interface of claim 26, wherein said distance is less than approximately half the width of said interface as seen by the operator.
28. (Original) The interface of claim 24, wherein said transaction record form includes numeric data values, but is generated without numeric data input by the operator.
29. (Original) The interface of claim 28, wherein said numeric data values are based on the physical location of said parameters as placed by the operator in said preference field.

30. (Original) The interface of claim 24, wherein said identified personal parameters can be ranked in relative importance by the operator based on their location in said preference field.
31. (Original) The interface of claim 30, wherein a relative ranking between data parameters can be changed by the user by altering a relative physical arrangement of said data parameters on said parameter canvas.
32. (Original) The interface of claim 30, wherein said preference field includes a gradient visible to the operator for assisting in the ranking of said parameters.
33. (Original) The interface of claim 30, wherein said parameters can be ranked by both a relative horizontal and vertical location in said preference field.
34. (Original) The interface of claim 32, further wherein said preference field conveys visible feedback information when the operator is arranging said parameters.
35. (Original) The interface of claim 24, wherein when the interface is invoked by the operator, an initial proposed arrangement of parameters is presented to the operator in said preference field, which initial proposed arrangement can be modified by the operator.
36. (Original) The interface of claim 24, wherein said parameters include factors associated with an operator's reasons for performing or engaging in a particular activity.
37. (Amended) The interface of claim [22] 24, wherein said parameters include factors associated with lessons learned by a user concerning an event.
38. (Amended) The interface of claim [22] 24, wherein said transaction record form can be retrieved and modified by the operator at a later time.
39. (Amended) The interface of claim [22] 24, wherein said parameters can be customized by the operator.
40. (Amended) The interface of claim [22] 24, wherein said interface also provides a visual comparison between input data in said transaction record form and other transaction record forms.
41. (Amended) The interface of claim [22] 24, wherein said interface also provides visual feedback to such operator based on an evaluation of said input data in said transaction record form.

75. (Amended) A method for permitting a user to identify personal parameters concerning an action and/or transaction to a computer program, the method comprising the steps of:
- providing a menu of one or more parameters available for selection by the user, said menu being displayed in a first portion of an interface visible to the user; and
  - providing a preference field occupying a second portion of the interface visible to the user; and
  - permitting the user to move any of said parameters to said preference field so as to identify in visual form any of such user's personal parameters associated with the transaction; and
  - generating a data picture by visually displaying said personal parameters ranked in an order of importance to the user; and
  - storing said personal parameters are stored in a transaction record form usable by the computer program.
76. (Original) The method of claim 75, wherein all of the user's personal parameters are captured using a single data picture.
77. (Original) The method of claim 75, wherein all of the user's personal parameters are captured during a data collection session using a single data collection screen.
78. (Original) The method of claim 75, wherein the personal parameters describe one or more mental impressions of such action and/or transaction.
79. (Original) The method of claim 75, wherein said parameters associated with the transaction can be selected and moved by said user along a distance spanning from said menu to said preference field by physically manipulating an electronic pointing device.
80. (Original) The method of claim 79, wherein said distance is less than approximately half the width of said interface as seen by the user.
81. (Original) The method of claim 75, wherein said transaction record includes numeric data values, but is generated without numeric data input by the user.
82. (Original) The method of claim 81, wherein said numeric data values are based on the physical location of said parameters as placed by the user in said preference field.
83. (Original) The method of claim 75, wherein said parameters can be ranked according to their physical arrangement in said preference field.
84. (Original) The method of claim 75, further including a step of providing a gradient visible to the user for assisting in the ranking of said parameters.

85. (Original) The method of claim 75, further including a step of providing visible feedback information when the user arranges said parameters.
86. (Original) The method of claim 75, wherein said data parameters can be ranked by both a relative horizontal and vertical location in said preference field.
87. (Original) The method of claim 75, further including a step of presenting an initial data picture to the user in said preference fields, said initial data picture being based on prior data pictures previously entered by the user.
88. (Original) The method of claim 75, wherein said parameters include factors associated with a user's reasons for performing or engaging in a particular activity.
89. (Original) The method of claim 75, further including a step of providing a visual comparison between said data picture and other data pictures.
90. (Original) The method of claim 75, further including a step of providing visual feedback based on an evaluation of said data input.